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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 3446-US

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on July 27, 2009

Signature Maureen Capozzi

Typed or printed name Maureen Capozzi

Application Number	Filed
09/818,670	March 28, 2001

First Named Inventor: Sorcha O'Callaghan

Art Unit	Examiner
2619	Mark Mais

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- ☑ attorney or agent of record. Registration number 48,485.
- ☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

Andrew J. Curtin
Typed or printed name

508-323-1330
Telephone number

7-27-2009
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: O'Callaghan, et al.

Serial No.: 09/818,670 Group No.: 2619

Filed: March 28, 2001 Examiner: Mais, Mark

For: NETWORK SWITCH WITH MUTUALLY COUPLED LOOK-UP ENGINE AND NETWORK PROCESSOR

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office via the Office electronic filing system in accordance with §1.6(a)(4) on:

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Maureen Capozzi

Signature: Maureen Capozzi

Pre-Appeal Brief Request for Review

MAIL STOP: AF
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Applicants hereby submit the reasons for our concurrently filed Pre-Appeal Request for Review to the United States Patent and Trademark Office. This Pre-Appeal Brief is in response to the Final Office Action mailed January 27, 2009. Concurrent with the filing of this Pre-Appeal Brief is a Notice of Appeal (Form SB/31), a Pre-Appeal Brief Request for Review (Form SB/33) and a petition for an Extension of Time for THREE (3) Months.

1. Status of the Claims

Claims 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang, et al., (U.S. 5,917,819 – Yang). Claims 1-12 and 22 were cancelled previously.

2. The Examiner's assertion of Yang teaching is a clear error of fact

Regarding claims 13-21, Yang describes a two-stage hierarchical look-up function performed in an ATM switch. A first lookup engine at a receiving input/output module (IOM) determines all IOMs in the switch that have ports that will transmit a received cell. A second lookup engine, at each transmitting IOM, determines which ports of the particular IOM will transmit.

In contrast, the invention is switch that has a lookup engine to retrieve an initial port bitmask (claim 13). The operation of the hardware is interlocked with the operation of a network processor that can operate in parallel with the lookup engine to modify a port bitmask of the received packet. The lookup engine cannot forward the packet until released by the network processor. The network processor then sends the look-up engine an indication that the processing function has been executed. Yang fails to suggest or make obvious what is claimed.

Claimed is a look-up engine operative to retrieve a port bitmask in response to a header portion of a received packet and to forward the received packet only in response to receiving a modified port bitmask. Yang never teaches, describes, shows or suggests either modifying a port bitmask, or a modified port bitmask. Yang explicitly distinguished between a port bitmask and a connection identifier (CID), see col. 1, lines 52-64, below:

> tiple outgoing VPI/VCIs for multicast transmission. When a multicast cell enters the switch through an I/O module ("IOM"), the cell VPI/VCI is mapped to a smaller, local address, i.e., multicast identifier ("MID"), which is copied to the cell header. The cell is then forwarded to the appropriate IOMs for transmission. The IOMs each have a first lookup table for providing a port bitmask, and a connection identifier ("CID") in response to the cell MID. The IOMs also have a second lookup table for providing a VPI/VCI in response to the CID and, in the case of a multiport-multicast cell, in response to the port CID plus the port identification, i.e., the CID and the port identification are added to provide an address value. The IOM's advantageously distinguish

A port bitmask and a CID are provided in response to receiving a multicast identifier (MID), which is generated when a VPI/VCI is mapped to a local address. The MID is then copied to a cell header. It is taught by Yang to get a new CID in response to particular circumstances, but never get a modified port bitmask. The Examiner will note that Yang distinguishes the CID from the port bitmask, as the VPI/VCI is provided only in response to the CID.

Each I/O module (IOM) includes a lookup table for CIDs and bitmasks, see col. 2, lines 40-45, below:

("ATM") switch **8** for transmission of ATM cells. The switch includes fourteen input output modules ("IOMs") **10** and a switching fabric **12**. The IOMs each include a 64k×16 bit RAM CID/bitmask lookup table **14**, a 128k×32 bit RAM output translation lookup table **16** and an incoming cell translation circuit **18** with an identifier lookup table **20**. Each

As is explicitly taught by Yang, the CID and the MID are based on the VPI/VCI of a cell, see. Col. 3, lines 12-15, below:

contains a global multicast identifier ("MID"). The CID and MID are based on the VPI/VCI of the incoming cell and ascertained via reference to an identifier lookup table **20** in the translation circuit **18**. The presently disclosed switch

No such thing is taught for the port bitmask. It is the CID that is overlaid on the MID in the local header, see, col. 3, line 60-col. 4, line 5, below:

Upon receipt of the multicast cell at the respective IOM's for which the IOM bits are set in the multicast cell header, the CID/bitmask lookup table **14** is indexed using the MID to locate the port bitmask **36** which identifies the appropriate ports within the IOM from which the multicast cell will be transmitted. The CID/bitmask table **14** is divided into two 32k sections **44, 46**. The first section **44** contains paired port bitmask/reserved entries indexed by CID. The second section **46** contains paired port bitmask/CID entries indexed by MID. The MID is used as an index to get the port bitmask and CID from the second section **46** in two read operations. The CID **48** which is overlaid on the MID in the local header. In the case of multicast cell which is destined for

There is never any teaching of modifying a port bitmask, as claimed.

Since Yang never teaches receiving a modified a port bitmask, Yang can never teach only forwarding a packet in response to receiving a modified port bitmask, as claimed. The Examiner's assertion to the contrary is clear error. Further, Yang can never teach a network processor operable to perform a processing function, in response to at least one of said received packet and said port bitmask, to generate the modified port bitmask and to provide the modified port bitmask to the lookup engine, as claimed. Yang's teaching of overlaying a

CID on an MID can never teach a modified port bitmask. Therefore, the rejection based on Yang should be reconsidered and withdrawn as clear error.

Claims 14-21 depend from claim 13, and inherit the limitations of Independent claim 13. Since Yang fails to teach, suggest or show the explicit elements of claim 13 that require a modified port bitmask in order to forward a received packet, claims 14-21 are therefore allowable as depending from claim 13.

3. Conclusion

The Applicant has demonstrated clear error in the Examiner's reasoning for rejecting Independent claims 13-21. It is believed that this application is now in condition for allowance. A notice to this effect is respectfully requested. Should further questions arise concerning this application, the Examiner is invited to call Applicant's attorney at the number listed below. Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 50-3650.

Respectfully submitted,
3Com Corporation,

By _____

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